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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 1282-006/MMM	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US01/48057	International filing date (day/month/year) 01 November 2001 (01.11.2001)	Priority date (day/month/year) 01 November 2000 (01.11.2000)
International Patent Classification (IPC) or national classification and IPC IPC(7): G06K 15/00 and US Cl.: 358/1.15		
Applicant FLEXIWORLD TECHNOLOGIES, INC.		
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>11</u> sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of _____ sheets.</p> <p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the report</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of report with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input checked="" type="checkbox"/> Certain observations on the international application</p>		
Date of submission of the demand 30 May 2002 (30.05.2002)	Date of completion of this report 24 August 2004 (24.08.2004)	
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Form PCT/IPEA/409 (cover sheet)(July 1998)

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I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-48 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages 49-68, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the drawings:
pages 1-13, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>1, 3, 4, 6-12, 14-20, 24-27, 29, 30, 32, 33, 35, 36, 38-44, 46, 47, 50, 53-55, 58-61, 63-67, 69-74, 76-78, 80-84, 86-88, 91, 93, 95-97, 99, 100, 102, 106-109, 111-115, 117, 118, 120, 121, 126-130, 132-140, 142-153, 155-163, 165-176, 178-182</u>	NO
Inventive Step (IS)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO
Industrial Applicability (IA)	Claims <u>Please See Continuation Sheet</u>	YES
	Claims <u>Please See Continuation Sheet</u>	NO

2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

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VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the questions whether the claims are fully supported by the description, are made:

Claim 181 is objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claim 181 indefinite for the following reason(s): There are two claims 181.

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(To be used when the space in any of the preceding boxes is not sufficient)

V.1. Reasoned Statements:

The opinion as to Novelty was positive (Yes) with respect to claims 2, 5, 13, 21-23, 28, 31, 34, 37, 45, 48, 49, 51, 52, 56, 57, 62, 68, 75, 79, 85, 89, 90, 92, 94, 98, 101, 103-105, 110, 116, 119, 122-125, 131, 141, 154, 164, 177

The opinion as to Inventive Step was positive (Yes) with respect to claims NONE

The opinion as to Inventive Step was negative (NO) with respect to claims 1-182

The opinion as to Industrial Applicability was positive (YES) with respect to claims 1-182

The opinion as to Industrial Applicability was negative (NO) with respect to claims NONE

V. 2. Citations and Explanations:

Claims 69-74, 76-78, 80-84, 86-88, 91, 93, 95-97, 99, 100, 102, 106-109, 111-115, 117, 118, 120, 121, 126-130, 132-140, 142-153, 155-163, 165-176, 178-182 lack novelty as being anticipated by Lobiondo (US 5,287,194)

Regarding claims 1, 63, 66, 78: Lobiondo teaches a data output method for rendering at one or more output devices (printer, column 3, line 25) data content accessed from an information apparatus (workstation, column 3, line 27), comprising: establishing a communication channel (column 3, lines 25-26) between the information apparatus and the one or more output devices; receiving at the information apparatus over the communication channel one or more attributes (column 4, lines 45-55) corresponding to the one or more output devices; selecting at the information apparatus the one or more output devices for rendering the data content based at least in part on the one or more attributes; and delivering the data content to the one or more selected output devices for rendering. (Column 4, lines 35-68)

Regarding claims 33, 65, 97, 114, 134: Lobiondo teaches a data output method for rendering at a selected output device (printer, column 3, line 25) data content accessed from an information apparatus, (computer, column 3, line 27) comprising: establishing a communication channel (column 3, lines 25-27) between the information apparatus and the selected output device; receiving at the information apparatus one or more components associated with the selected output device and enabling the data content to be rendered by the selected output device, the one or more components including an indication of an output data associated with the selected output device (column 3, 4); conforming at the information apparatus the data content to the output data associated with the selected output device; and delivering the output data to the selected output device for rendering.

Regarding claims 3, 35: Lobiondo teaches in which the data content resides in the information apparatus. (Column 3, lines 30-35)

Regarding claims 4, 36: Lobiondo teaches obtaining the data content from a data source (column 3, lines 30-35) distinct from the information apparatus.

Regarding claims 6, 38: Lobiondo teaches obtaining from the information apparatus payment information to administer payment for the output service that is selected. (Column 1, lines 20-25)

Regarding claims 7, 39: Lobiondo teaches including the information apparatus discovering the one or more output devices to be available to render the data content. (Column 4, lines 45-68)

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(To be used when the space in any of the preceding boxes is not sufficient)

Regarding claims 8, 40: Lobiondo teaches in which discovering the one or more output devices includes the information apparatus broadcasting an output service request and awaiting one or more responses from the one or more output devices. (Column 6, lines 25-35, column 3, lines 64-65, column 4, lines 45-50)

Regarding claims 9, 41: Lobiondo teaches in which discovering the one or more output devices includes the one or more output devices broadcasting information about the output services they provide and awaiting to be contacted by the information apparatus. (Column 6, lines 25-35, column 3, lines 64-65, column 4, lines 45-50)

Regarding claims 10, 42: Lobiondo teaches in which discovering the one or more output devices includes the information apparatus obtaining from a service node information about the one or more output devices. (Column 4, lines 1-15)

Regarding claims 11, 43: Lobiondo teaches in which the discovering of one or more output devices involves determining if the one or more output devices satisfy one or more output service requirements. (Column 4, lines 45-68)

Regarding claims 12, 44: Lobiondo teaches in which the one or more output service requirements include one or more of price, quality of service, and availability. (Column 4, lines 45-68)

Regarding claims 14: Lobiondo teaches in which the attributes associated with the one or more output devices include information characterizing the one or more output devices. (Column 4, lines 45-68)

Regarding claim 15: Lobiondo teaches in which the information characterizing the one or more output devices includes one or more of a make identifier, a model identifier, an output device type identifier, an output data format identifier, and an output device identifier. (Column 4, lines 45-68)

Regarding claim 16: Lobiondo teaches in which the attributes associated with the one or more output devices include information characterizing output services provided by the one or more output devices. (Column 4, lines 45-68)

Regarding claim 17: Lobiondo teaches in which the information characterizing the output services includes one or more of a quality of service indicator, an availability of service indicator and a service fee indicator. (Column 4, lines 45-68)

Regarding claim 18: Lobiondo teaches in which the selecting of the one or more output devices includes input from a user. (Column 5, lines 25-30)

Regarding claim 19: Lobiondo teaches in which the selecting of the one or more output devices is based at least in part upon a predetermined default criterion that is stored in the information apparatus. (Column 4, lines 45-68)

Regarding claim 20: Lobiondo teaches receiving at the information apparatus via the communication channel components enabling the data content to be rendered by the selected one or more output devices. (Column 5, lines 15-35)

Regarding claim 24: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 29-31)

Regarding claim 25: Lobiondo teaches in which the one or more output devices include one or more of a printing device, a display device, and an audio output device. (Column 3, lines 30-35)

Regarding claim 26: Lobiondo teaches conforming at the information apparatus the data content to an output data format compatible with the one or more selected output devices before delivering the data content to the one or more selected output devices for rendering. (Column 4, lines 45-68).

Regarding claim 27: Lobiondo teaches in which the conforming of the data content employs the one or more attributes. (Column 4, lines 45-68)

Regarding claim 29: Lobiondo teaches delivering the data content to an output controller (scheduler) before delivering the data content to the selected output device. (Column 4, lines 45-68)

Regarding claim 30: Lobiondo teaches in which the output controller is one of a server, an external controller and a data access point. (Column 3, lines 35-50)

Regarding claim 32: Lobiondo teaches including converting the data content into an output data

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compatible with the one or more selected output devices. (Column 3, lines 30-35, column 4, lines 45-68)

Regarding claim 46: Lobiondo teaches in which the one or more components are stored in the one or more output devices. (Column 3, lines 65-68, column 4, lines 1-15).

Regarding claim 47: Lobiondo teaches in which the one or more components are stored in one or more output controllers associated with the output devices. (Column 3, lines 65-68, column 4, lines 1-15).

Regarding claim 50: Lobiondo teaches in which the one or more components include one or more device dependent parameters relating to the selected output device. (Column 4, lines 1-15)

Regarding claim 53: Lobiondo teaches selecting at the information apparatus the selected output device from among plural output devices based on one or more selection criteria. (Column 4, lines 45-68)

Regarding claim 54: Lobiondo teaches in which the one or more selection criteria are obtained from a user. (Column 4, lines 43-45)

Regarding claim 55: Lobiondo teaches in which the one or more selection criteria are automatically defined based on a predetermined default stored on the information apparatus. (Column 4, lines 45-52)

Regarding claim 58: Lobiondo teaches including converting the output data into a form compatible to one of an output engine, a printer engine, an output controller, (column 3, lines 30-36) and a printer controller.

Regarding claim 59: Lobiondo teaches in which the conformed data content is further processed in an output controller associated with the selected output device before being delivered to the selected output device. (Column 3, lines 30-50)

Regarding claim 60: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 29-31)

Regarding claim 61: Lobiondo teaches in which the output device includes one of a printing device, (column 3, lines 30-32) a display device, and an audio output device.

Regarding claim 64: Lobiondo teaches software for conforming at the information apparatus the data content in accordance with the one or more attributes before delivering the data content to the one or more selected output devices for rendering. (Column 4, lines 45-68)

Regarding claim 67: Lobiondo teaches conforming at the information apparatus the data content in accordance with the one or more attributes before delivering the data content to the one or more selected output devices for rendering. (Column 4, lines 45-68)

Regarding claims 69, 80: Lobiondo teaches in which the selected output system includes a network. (Column 3, lines 20-25)

Regarding claims 70, 81: Lobiondo teaches in which the selected output system includes at least one output device and at least one output controller. (Column 3, lines 20-35)

Regarding claims 71, 82: Lobiondo teaches in which an output controller in the selected output system communicates with the information apparatus. (Column 3, lines 20-35)

Regarding claim 72: Lobiondo teaches in which the output controller is associated with one or more output devices. (Column 3, lines 20-35)

Regarding claims 73, 83: Lobiondo teaches in which the output controller is one of a server, an external controller (workstation, column 3, lines 20-35) and a data access point.

Regarding claims 74, 84: Lobiondo teaches in which the output controller receives the data content. (Column 3, lines 30-35)

Regarding claims 76, 86: Lobiondo teaches converting the data content into a form compatible to the selected one or more output devices. (Column 4, lines 45-68)

Regarding claims 77, 87: Lobiondo teaches the output controller delivering the data content to the selected one or more output devices. (Column 4, lines 45-68)

Regarding claim 88: Lobiondo teaches in which the one or more components are stored in one or more output controllers associated with the output devices. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 91: Lobiondo teaches in which the one or more components include one or more

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device dependent information or parameter relating to the selected output device. (Column 4, lines 45-68)

Regarding claim 93: Lobiondo teaches in which the one or more components include information characterizing an output service provided by the selected output system. (Column 4, lines 45-68)

Regarding claim 95: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 25-35)

Regarding claim 96: Lobiondo teaches in which the output device includes one of a printing device, a display device, and an audio output device. (Column 3, lines 25-35).

Regarding claim 99: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 25-35)

Regarding claim 100: Lobiondo teaches in which the output device includes one of a printing device, a display device, and an audio output device. (Column 3, lines 25-35)

Regarding claim 102: Lobiondo teaches in which the information relating to the output device is obtained from the output device. (Column 3, lines 64-65)

Regarding claim 106: Lobiondo teaches in which the one or more devices dependent components includes information relating to the output device. (Column 4, lines 45-68)

Regarding claims 107, 108: Lobiondo teaches in which the device dependent output data is received by an output controller before being delivered to the selected output device. (The controller of printer fig. 2)

Regarding claims 109: Lobiondo teaches in which the output controller is one of a server, an external controller and a data access point. (Column 3, lines 20-35)

Regarding claim 111: Lobiondo teaches in which the output device includes an output engine, the method further including converting the output data content into a form compatible with the output engine. (Fig. 2, column 4, lines 45-68)

Regarding claim 112: Lobiondo teaches in which the output device is a printer and includes a printer controller, the method further including converting the output data into a form compatible with the printer controller. (Fig. 2, column 4, lines 45-68)

Regarding claim 113: Lobiondo teaches providing payment information from the information apparatus to pay for the rendering provided by the output device. (Column 1, lines 20-35)

Regarding claim 115: Lobiondo teaches providing payment information from the information apparatus to pay for the rendering provided by the output device. (Column 1, lines 20-35)

Regarding claim 117: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 25-35)

Regarding claim 118: Lobiondo teaches in which the output device includes one of a printing device, a display device, and an audio output device. (Column 3, lines 25-35)

Regarding claim 120: Lobiondo teaches in which the selecting of an available output device involves user input. (Column 4, lines 40-50)

Regarding claim 121: Lobiondo teaches in which the selecting of an available output device includes the information apparatus discovering the output devices. (Column 4, lines 45-68)

Regarding claim 126: Lobiondo teaches in which the device dependent components include information characterizing the output device. (Column 4, lines 1-15)

Regarding claims 127: Lobiondo teaches in which the information characterizing the output device includes one or more of a make identifier, a model identifier, an output device type identifier, an output data format identifier, and an output device identifier. (Column 4)

Regarding claim 128: Lobiondo teaches in which the device dependent output data is received by an output controller before being delivered to the selected output device. (Column 4)

Regarding claim 129: Lobiondo teaches in which the output controller is internal to the output device. (Fig. 2)

Regarding claim 130: Lobiondo teaches in which the output controller is one of a server, an external controller and a data access point. (Column 3, lines 25-35)

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Regarding claim 132: Lobiondo teaches converting the output data content into a form compatible to the output engine. (Column 4)

Regarding claim 133: Lobiondo teaches in which the output device is a printer having a printer controller and the method further includes converting the output data into a form compatible with the printer controller. (Fig. 2, column 4)

Regarding claim 135: Lobiondo teaches providing payment information from the information apparatus to pay for the rendering provided by the output device. (Column 1, lines 20-35)

Regarding claims 136, 155, 172: Lobiondo teaches a method of rendering data content that is accessible from an information apparatus, (PC, column 3, lines 25-35) comprising: identifying a first available output device from among one or more output devices that can be accessed by the information apparatus; (column 4) establishing bi-directional communication between the information apparatus and the first available output device (column 3, lines 20-30); receiving from the first available output device information regarding a feature of the first available output device (column 4); determining from the information whether the feature of the first available output device meets a predefined criterion for rendering the data content; and transmitting the data content to the first available output device if the feature meets the predefined criterion. (Column 4)

Regarding claims 137, 156, 160, 174, 181: Lobiondo teaches in which it is determined that the feature of the first available output device does not meet the predefined criterion, the method further comprising: identifying a second available output device from among one or more output devices that can be accessed by the information apparatus; establishing bi-directional communication between the information apparatus and the second available output device; receiving from the second available output device information regarding a feature of the second available output device; determining from the information whether the feature of the second available output device meets the predefined criterion for rendering the data content; and transmitting the data content to the second available output device if the feature meets the predefined criterion. (Column 5)

Regarding claims 138, 157: Lobiondo teaches in which it is determined that the feature of the first available output device does not meet the predefined criterion, the method further comprising providing at the information apparatus a user indication that the first available output device does not meet the predefined criterion. (Column 5)

Regarding claims 139, 158: Lobiondo teaches providing at the information apparatus a user indication of a user-selectable option to cancel the rendering of the data content. (Column 5, lines 25-30)

Regarding claims 140, 159: Lobiondo teaches providing at the information apparatus a user indication of a user-selectable option to attempt to identify an available output device with a feature that meets the predefined criterion. (Column 5)

Regarding claim 142: Lobiondo teaches in which the identifying of an available output device involves user input. (Column 5)

Regarding claim 143: Lobiondo teaches in which the identifying of an available output device involves a discovery process. (Column 4)

Regarding claim 144: Lobiondo teaches in which the feature includes information characterizing the output device. (Column 4, lines 1-15)

Regarding claim 145: Lobiondo teaches in which the feature includes a device dependent parameter related to the output device. (Column 4)

Regarding claim 146: Lobiondo teaches in which the feature includes information about a service provided by the output device. (Column 4)

Regarding claim 147: Lobiondo teaches in which the information about the service provided by the output device includes one or more of price, quality of service, and availability. (Column 4, lines 45-68)

Regarding claim 148: Lobiondo teaches in which the predefined criterion includes user input. (Column 4, lines 40-45)

Regarding claim 149: Lobiondo teaches in which the predefined criterion includes a predetermined

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default parameter stored in the information apparatus. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 150: Lobiondo teaches in which the predefined criterion includes a predefined algorithm stored in the information apparatus. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 151: Lobiondo teaches processing the data content to a form that is compatible with the output device before transmitting the data content to the output device. (Column 4, lines 45-68)

Regarding claim 152: Lobiondo teaches in which the information apparatus includes one of a mobile computing device, a pervasive device, a digital camera, and a personal computer. (Column 3, lines 25-35)

Regarding claim 153: Lobiondo teaches in which the output device includes one of a printing device, a display device, and an audio output device. (Column 3, lines 25-35)

Regarding claims 161, 173: Lobiondo teaches in which a first available output device is not discovered in the search, the method further comprising providing at the information apparatus a user indication that a first available output device has not been discovered. (Column 5)

Regarding claims 162: Lobiondo teaches providing at the information apparatus a user indication of a user-selectable option to cancel the rendering of the data content. (Column 5)

Regarding claim 163: Lobiondo teaches providing at the information apparatus a user indication of a user-selectable option to again attempt to identify an available output device. (Column 5)

Regarding claim 165: Lobiondo teaches in which the searching for a first available output device involves user input. (Column 4, lines 40-45)

Regarding claim 166: Lobiondo teaches in which the feature of the first available output device includes a device dependent parameter related to the output device. (Column 4)

Regarding claim 167: Lobiondo teaches in which the feature of the first available output device includes one or more of price, quality of service, and availability. (Column 4, lines 45-68)

Regarding claim 168: Lobiondo teaches in which the predefined criterion includes user input. (Column 4, lines 40-45)

Regarding claims 169: Lobiondo teaches in which the predefined criterion includes a predetermined default parameter stored in the information apparatus. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 170: Lobiondo teaches in which the predefined criterion includes a predefined algorithm stored in the information apparatus. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 171: Lobiondo teaches processing the data content to a form that is compatible with the output device before transmitting the data content to the first available output device. (Column 4, lines 45-68)

Regarding claim 175: Lobiondo teaches in which determining which of the one or more available output devices meet the predefined criterion is performed automatically by the information apparatus. (Column 4, lines 45-68)

Regarding claim 176: Lobiondo teaches in which determining which of the one or more available output devices meet the predefined criterion is performed by a user. (Column 5)

Regarding claim 178: Lobiondo teaches in which the predefined criterion includes one or more of price, quality of service, and availability. (Column 4, lines 45-68)

Regarding claim 179: Lobiondo teaches in which the predefined criterion includes user input. (Column 4, lines 40-45)

Regarding claim 180: Lobiondo teaches in which the predefined criterion includes a predefined algorithm stored in the information apparatus. (Column 3, lines 64-68, column 4, lines 1-15)

Regarding claim 182: Lobiondo teaches in which the software for determining which of the one or more available output devices meet the predefined criterion is performed by a user. (Column 5)

Claims 2, 5, 13, 34, 37, 45, 68, 79, 98, 116, 141, 164, 177, lack inventive steps over Lobiondo as applied to claims 1, 7, 33, 39, 66, 78, 97, 114, 136, 160, 174 and further in view of Schneck (US 5,933,498)

Regarding claims 2, 13, 34, 45, 68, 79, 98, 116, 141, 164, 177: Lobiondo does not teach in which the

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(To be used when the space in any of the preceding boxes is not sufficient)

communication channel includes a wireless communication channel.

Schneck teaches a wireless communication channel. (Column 15, line 7)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's communication channel to include a wireless communication channel to increase versatility.

Regarding claims 5, 37: Lobiondo does not teach obtaining authentication information from the information apparatus and authenticating permission for the information apparatus to access the one or more output devices.

Schneck teaches obtaining authentication information and authenticating permission for the information apparatus to access data. (Column 15, lines 20-30)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's communication system to include obtaining authentication information from the information apparatus and authenticating permission for the information apparatus to access the one or more output devices such that network security is increased.

Claims 21-23, 48, 49, 51, 52, 89, 90, 92, 94, 103-105, 122-125 lack inventive steps over Lobiondo as applied to claims 1, 20, 33, 78, 97, 114 and further in view of Fukada (US 5,761,480).

Regarding claims 21-23, 48-49, 51, 52, 89, 90, 92, 94, 103-105, 122-125: Lobiondo teaches in which the components include software code/application/driver.

Fukada teaches to transfer software code/application/driver to a host such that the host would process a print job for a printer. (Column 7, lines 5-20)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo to include the components include software code/application/driver, such that the information apparatus would be able to process the print job for the output device.

Claims 28, 31, 56, 57, 62, 75, 85, 101, 110, 119, 131, 154 lack inventive steps over Lobiondo as applied to claims 1, 26, 29, 33, 74, 82, 107, 114, 128, 136 and further in view of Dennis (US 5,337,258).

Regarding claims 28, 31, 56, 57, 75, 85, 110, 131: Lobiondo does not teach performing raster image processing on the data content at the one or more selected output devices.

Dennis teaches a host computer performing raster image processing on the data content at the one or more selected output devices. (Column 15, lines 10-40, column 16, lines 23-27)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's data information apparatus to include: performing raster image processing on the data content at the one or more selected output devices.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's data information apparatus because it would have reduce the image processing time/circuit in the output apparatus and reduce the cost of the output apparatus and increase the speed of printing.

Regarding claims 62, 101, 119, 154: Lobiondo does not teach in which the output data includes compressed data.

Dennis teaches a host computer output data includes compressed data to an output devices. (Column 15, lines 10-40, column 16, lines 23-27)

Therefore, it would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's data information apparatus to include: in which the output data includes compressed data.

It would have been obvious to a person with ordinary skill in the art at the time the invention was made to have modified Lobiondo's data information apparatus because it would have speed up data transmission and reduces memory.